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| 10/020,167      | 12/18/2001  | Yoshikazu Tanaka     | 0229-0683P          | 9273             |

2292 7590 05/17/2005

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| EXAMINER |
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MAKI, STEVEN D

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| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/020,167

Applicant(s)

TANAKA, YOSHIKAZU

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1) A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2-22-05 has been entered.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-6 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the relationship between the other portion and the reduced thickness portion(s) is unclear, the number of portions is unclear and it is unclear if each of "the portions" must have the recited dimensions. With respect to 112 second paragraph, it is suggested to (1) delete lines 9-11, (2) on line 14 change "the reduced thickness portion" to --each reduced thickness portion--, (3) on line 14 after "wider than" insert --the width of-- and (4) on line 15 (last line) after "portion" insert --and the thickness of the tape in the cord embedded portion is larger than the thickness of each reduced thickness portion so that the cord is completely embedded in the unvulcanized rubber--.

In claim 2, there is no clear antecedent basis for "said diameter D". It is suggested to insert --D-- after "diameter" on line 7 of claim 1.

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- 4) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 5) Claims 1, 3-6 and 19 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the *combination* of (1) the cord having a diameter being in the range of from 1/100 to 1/2 times the width of the tape *and* (2) on each side of the cord embedded portion, a reduced thickness portion is formed wherein the reduced thickness portion is wider than the cord embedded portion. The original disclosure fails to reasonably convey *simultaneously* satisfying both of these limitations. For example, if the cord diameter is 1/2 times the width of the tape, then the reduced thickness portion cannot be wider than the cord embedded portion. This 112 first paragraph rejection may be overcome by changing "in a range of from 1/100 to 1/2 times the width of the tape" to --in a range of 0.3 to 1.5 mm--.

- 6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**7) Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bower (US 2767113) in view of Mitchell (US 3974960) and at least one of Marquette (US 1321223) and Arnberg (US 1977108).**

The claimed "tape to be wound into a tire component" reads on a "twist tie".

Bower discloses a tie comprising two layers of plastic material and a single wire 13 ("cord") wherein (1) the plastic layers are laminated together such that the single wire 13 is completely embedded in the plastic material, (2) the wire embedded portion is thicker than reduced thickness side portions, (3) the reduced thickness side portions have a constant thickness and (4) the reduced thickness side portions are wider than the wire embedded portion. See figures 1 and 2. Bower does not specifically recite using unvulcanized rubber instead of plastic material. However, it would have been an obvious alternative to laminate a wire ("cord") between two unvulcanized rubber layers instead of two plastic layers to form a tie having a single wire as shown in figure 2 of Bower in view of (1) Mitchell's suggestion that a tie may be made from styrene butadiene rubber instead of thermoplastic material (col. 2 lines 31-41) and (2) at least one of (a) Marquette's teaching to embed at least one strand between two layers of unvulcanized rubber as shown in figure 4 and described at page 3 lines 13-23 and (b) Arnberg's teaching to laminate threads between two rubber layers as shown in figure 3 and vulcanize afterwards (page 1 lines 83-100).

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**8) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bower (US 2767113) in view of Mitchell (US 3974960) and at least one of Marquette (US 1321223) and Arnberg (US 1977108) as applied above and further in view of Goodwin (US 3409948) and Stoolk et al (US 4797313).**

As to claim 2, it would have been obvious to provide Bower's tie such that the tape width is 10-30 mm, the thickness of the reduced thickness portion is 0.5-1.5 mm and the wire diameter is 0.3-1.5 mm in view of Goodwin's teaching a tie strip may have a width of ½ inch (12.7 mm) and Stolk et al's teaching that a twist tie may have a width of "10 mm or more" and a thickness of 0.5 to 4 mm at the center thickness portion.

**9) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bower (US 2767113) in view of Mitchell (US 3974960) and at least one of Marquette (US 1321223) and Arnberg (US 1977108) as applied above and further in view of Iwai et al (US 5154964).**

As to claim 3, it would have been obvious to provide short fibers as claimed since Iwai et al teaches that glass fibers have been used in extruded and drawn polymeric ribbons for twist ties to increase the strength of twist ties (the glass fibers being longitudinally oriented by the extruding and drawing). See col. 3 lines 38-48.

#### **Allowable Subject Matter**

**10) Claims 4, 5 and 19 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112 paragraph as set forth in this Office action and (2) rewritten to include all of the limitations of the base claim and any intervening claims.**

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Marquette, directed to not crushing or not distorting cords, teaches a stand fabric comprising embedded cords between two layers of rubber such that the two layers of rubber are stuck together at reduced thickness portions. See figure 4. Marquette also teaches that the fabric may comprise but a single stand. See page 13-22. However, there is no motivation to form a single strand fabric a reduced thickness portion having substantially constant thickness on each side of the cord embedded portion such that each reduced thickness portion is wider than the width of the cord embedded portion.

Bower, discussed above, fails to teach using the tie to form a "tire component made of windings".

MacMurray discloses a tie for a bag having a single wire embedded portion and reduced thickness portions on each side thereof (figure 1), but fails to teach using the tie to form a "tire component made of windings".

Yokose (US 2952728) teaches an insulated conductor comprising a single conductor between two layers of rubber impregnated paper (figure 1), but fails to teach using the insulated conductor to form a "tire component made of windings".

The prior art of record including Marquette, Suzuki et al, Europe 218 and Chrobak, Bower, MacMurray and Yokose fails to suggest a **tire component made of windings** of a tape having (1) a single cord completely embedded in the unvulcanized rubber *and* (2) on each side of the cord embedded portion, a reduced thickness portion having a substantially constant thickness being formed *and* (3) each reduced thickness portion being wider than the width of the cord embedded portion *and* (4) the thickness of

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the tape in the cord embedded portion being larger than the thickness of each reduced thickness portion *in combination with* the remaining limitations required by claim 4.

. Remarks

11) Applicant's arguments with respect to claims 1-3 and 6 have been considered but are moot in view of the new ground(s) of rejection.

With respect to claims 4-5 and 19, note the indication of allowable subject matter.

Japan 506 is cited of general interest for showing using an unvulcanized strip having short fibers therein to form a tire component (i.e. sidewall rubber).

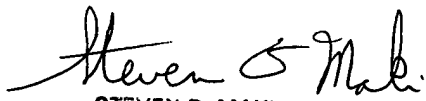
Crosby et al (US 2577843) is cited of interest for showing covering parallel wires on both sides with rubber as shown in figure 4.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
May 14, 2005

  
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5-14-05